

THE OLD WORLD MEMBRACIDÆ

BY FREDERIC W. GODING

In the following pages are brief descriptions, in the form of keys, of all known Membracidæ which have been found in the Palearctic, Oriental, and Australian regions, those inhabiting the Ethiopian and the African Palearctic regions having been treated elsewhere.¹ A few new forms will be found described within, together with citation of the original description of each species and the various habitats, while in all instances, where the figure of a species has been published, attention is directed to where it may be seen.

A number of heretofore unrecognized species, described by Fairmaire and Walker, have been placed in what is believed to be their correct generic position, examples being *Centrotus magelani* and *Centrotus paria* of Fairmaire, and the genus *Narnia* of Walker which is identical with Stål's genus *Terentius*.

The plan followed is that of the writer's "Classification of the Old World Membracidæ,"² wherein are keys to the subfamilies, tribes and genera together with synonyms.

The measurements given represent the extreme length from the head posteriorly, and the width between the tips of the supra-humerals if present, and between the humerals in the unarmed forms.

In the preparation of this work my own collection has been of the greatest use; but the writings of Fabricius, Fairmaire, Walker, Stål, Distant, Funkhouser, and a number of others have been freely consulted when arranging the keys and recording the localities.

ÆTHALIONINÆ

*Æthalionini***Darthula**

Kirkaldy, Ent. xxxviii, p. 242. (1900); *Urophora* Gray, Griff. ed. Anim. Kingd. Ins. ii, p. 261. (1832), preoccupied.

¹ The Membracidæ of Africa. Jour. N. Y. Ent. Soc. Vol. XL, June, 1932, pp. 205-240.

² Jour. N. Y. Ent. Soc. Vol. XXXIX, Sept., 1931, pp. 299-313.

KEY TO SPECIES

One ferruginous or piceous brown species, median and hind marginal carinæ paler, femora tetaceous, tibiæ and tarsi piceous; tegmina concolorous, venation paler, wings pale brown; 12-17, abd. proc. 13-17 mm.....**hardwicki**

LIST OF SPECIES

hardwicki Gray, Griff. Anim. Kingd. Ins. ii, p. 261, pl. 90, fig. 3 and pl. 138, fig. 5. (1832); Distant, Faun. Brit. Ind. iv, p. 78, fig. 64. (1908). Khasi Hills, Margherita, Naga Hills, Nepal, Sikhim, India; Ruby Mines, Burma; W. Yunnan, China.

*Tolanini***Porcorhinus**

Goding, Mon. Aust. Memb. p. 38. (1903).

KEY TO SPECIES

One ferruginous red species, head mottled with yellow, transverse yellow band on metopidium; tegmina with basal third yellow ferruginous punctate, middle third ferruginous, apical third clearer; abdomen salmon red, femora tawny the tips with tibiæ and tarsi yellowish; ♀ sordid green, tips humerals brown; 9 × 3.5 mm.**mastersi**

LIST OF SPECIES

mastersi Goding, Mon. Aust. Memb. p. 39, pl. 1, figs. 12, 15 and 16. (1903). Sydney, Mt. Victoria, N. S. W., Australia.

Hemicentrus

Melichar, Notes Leyden Mus. xxxvi, p. 114. (1914); *Sarritor* Distant, Faun. Brit. Ind. vi, Append. p. 182. (1916).

KEY TO SPECIES

- 1(4). Suprahumerals oblique, two or three times longer than broad at bases; scutellum broader than long, apex rounded, emarginate; legs yellow.
- 2(3). Eyes not visible from above; pronotum black, abdomen brown, tegmina brown hyaline, scutellum densely pubescent; suprahumerals three times longer than broad at bases, strongly recurved; 10 × 5 mm.**bispinus**
- 3(2). Eyes visible from above; entirely testaceous, tegmina subhyaline, scutellum with two white basal spots pilose; suprahumerals twice longer than broad at bases, straight, tips lightly recurved; 5-6 × 3 mm.**retusus**
- 4(1). Suprahumerals moderately oblique, slightly longer than broad at bases.
- 5(8). Scutellum broader than long, suprahumerals recurved from bases; pronotum and abdomen black.

- 6(7). Apex of scutellum roundly excised, dorsum flat; tegmina hyaline yellow clouded, base of interior discoidal cell stylate, of exterior cell truncate; legs rust brown; 7 mm. **bicornis**
- 7(6). Apex of scutellum distinctly bidentate, dorsum sulcate; tegmina smoky hyaline, base of interior discoidal cell truncate; of interior cell stylate; femora brown, tibiæ and tarsi yellow; 6×3 mm. **attenuatus**
- 8(5). Scutellum longer than broad, densely pubescent, apex roundly notched; tegmina ferruginous hyaline, base of interior discoidal cell stylate, of exterior cell truncate; entirely brown; suprahumeralis straight, tips lightly recurved; 7×3.6 mm. **cornutus**

LIST OF SPECIES

- bispinus** Stoll, Cig. p. 76, pl. 19, fig. 101. (1783). Ceylon.
aculeatus Oliver, Enc. Meth. vii, p. 669. (1792). Ceylon.
- retusus** Distant, Faun. Brit. Ind. vi, Append. p. 182, fig. 139. (1916).
 Farm Caves, Moulmein, Dawna Hills, Burma.
- bicornis** Melichar, Notes Leyden Mus. xxxvi, p. 115. (1914). *Semarang, Java.
- attenuatus** Funkhouser, Bul. Brook. Ent. Soc. xvi, p. 50, fig. 11. (1921).
 Kiautschau, China.
- cornutus** Funkhouser, Ann. Mus. Zool. Acad. Sci. USSR, xxviii, p. 150, pl. 6, fig. 6. (1927). Song Dinh, Annam, French Indo-China.

CENTROTINÆ

*Coccosterphini***Coccosterphus**

- Stal, Hemip. Fabr. ii, p. 51. (1869); *Pharotus* Buckton, Mon. Memb. p. 255. (1903).

KEY TO SPECIES

- 1(8). Clypeus extended well below margins of genæ, apical margin of head broadly truncate.
- 2(7). Metopidium unicarinate.
- 3(6). Apex of posterior process passing apex of clavus, median carina formed of tubercles; pronotum and legs black, tarsi yellow.
- 4(5). Tegmina piceous sprinkled with cretaceous dots which sometimes almost form a fascia; $2.5-3$ mm. **obscurus**
- 5(4). Tegmina tinted with castaneous and cretaceous, a large paler central area, or broad subbasal and subapical black fasciæ the black areas with raised cretaceous dots (variable); 2.5 mm. **decoloratus**
- 6(3). Apex of posterior process not reaching apex of clavus; pronotum purplish brown, densely pilose, median carina weak, body piceous, margins abdominal segments yellowish, tibiæ and tarsi tes-

- taceous; tegmina purplish brown sprinkled with paler spots at subbasal and central fasciæ, apical area pale hyaline; 4-5 × 2 mm. **mucronicollis**
- 7(2). Pronotum castaneous with a strong tubercular basal ridge projecting forward, a broader less elevated convex ridge each side, metopidium centrally and transversely ridged; apical area of posterior process black reaching apex of clavus; tegmina gray, basal fourth, median fascia and apical spots brownish yellow; 3.5-4 × 2-2.5 mm. **paludatus**
- 8(1). Clypeus almost continuous with lateral margins of the genæ, apical margin of head broadly rounded; apex of posterior process extended to apex of clavus.
- 9(12). Tegmina hyaline, longer than abdomen, with one or two transverse fasciæ.
- 10(11). Tegmina with basal third and median fascia brown, veins strong and sparingly tuberculate; pronotum and legs rust brown, median carina obsolete anteriorly; 3.5-4 × 2-2.5 mm. **tuberculatus**
- 11(10). Tegmina with more than basal third, and median and subapical fasciæ brown with white dots, veins not prominent with large black granules; pronotum and legs black, fine median carina percurrent; legs granular, tarsi yellow; 3 mm. **melichari**
- 12(9). Tegmina with spots, destitute of fasciæ.
- 13(14). Pronotum and legs fuscous, tibiæ ferruginous, median carina percurrent; tegmina subhyaline, longer than abdomen, base narrowly, large spot near apex clavus and tip of costa brown, veins with large tubercles; 4 × 2 mm. **stipulipennis**
- 14(13). Pronotum and legs black, median carina obsolete anteriorly; tegmina long as abdomen, semilucid yellow with white dots, basal third and granules on veins black; 3.25 × 2 mm. **minutus**

LIST OF SPECIES

- obscurus* Distant, Faun. Brit. Ind. iv, p. 73, fig. 60. (1908). Calcutta, India; Peradeniya, Ceylon.
- decoloratus* Distant, Faun. Brit. Ind. iv, p. 71, fig. 58. (1908). Calcutta, India.
- mucronicollis* Motschulsky, Etud. Ent. viii, p. 109. (1859); Distant, Faun. Brit. Ind. iv, p. 73, fig. 61. (1908). Kesbewa, Peradeniya, Mt. Nura-Ellia, Ceylon.
- paludatus* Distant, Faun. Brit. Ind. vi, Append. p. 175, fig. 130. (1916). Orissa near Puri, Chikkaballapura, Lake Chilka, Calcutta, Madras, India.
- tuberculatus* Motschulsky, Etud. Ent. viii, p. 109. (1859); Distant, Faun. Brit. Ind. iv, p. 72, fig. 59. (1908). Peradeniya, Kala-Weisa, Puttalam, Ceylon.
- fasciata* Meliehar, Homop. Ceylon, p. 122. (1903). Ceylon.

melichari nom. nov.

minutus Melichar, Homop. Ceylon, p. 121. (1903), preoccupied. Peradeniya, Kautherly, Puttalan, Trincomalee, Bandarawella, Kandy, Negombe, Matala, Weligama, Anuradhapura, Dambulla, Ceylon.

stipulipennis Buckton, Mon. Memb. p. 255, pl. 59, fig. 3. (1903). Brunei, Borneo.

minutus Fabricius, Ent. Syst. Suppl. p. 514. (1798); Distant, Faun. Brit. Ind. vi, Append. p. 175, fig. 129. (1916). Madras; Tranquebar, India.

Parayasa

Distant, Faun. Brit. Ind. vi, Append. p. 176. (1916).

KEY TO SPECIES

- 1(14). Apex of posterior process more or less convexly gibbous, not reaching apex of clavus, dorsum concavely sinuate.
- 2(13). Base of posterior process not gibbous; ocelli equidistant.
- 3(12). Head and pronotum brownish ochraceous.
- 4(11). Pronotum not granulate, apex posterior process black.
- 5(8). Metopidium and face black.
- 6(7). Tegmina subhyaline, broad basal and costal areas brownish ochraceous; 2.5–3 mm. **atricapilla**
- 7(6). Tegmina with broad basal area dark brown, median yellowish fascia, apical area black; 4 mm. **affixa**
- 8(5). Metopidium and face concolorous.
- 9(10). Tegmina brownish ochraceous, costal area and broad median fascia darker with short gray lines, apical area gray and brown mottled; 3.5 mm. **affinis**
- 10(9). Tegmina with basal half brownish ochraceous, median gray virescent fascia, remaining area virescent brown dotted; 4 × 2 mm. **elegantula**
- 11(4). Pronotum granulate, brownish ochraceous, apex posterior process concolorous; tegmina grayish white much spotted and suffused with brown, basal area broadly brown; 4 × 2 mm. **maculosa**
- 12(3). Head, pronotum and body black; tegmina black, claval and subclaval areas, median fascia and row of spots, apical and costal areas and large apical spots grayish white; 4–4.5 mm. **typica**
- 12(2). Base of posterior process depressed then strongly gibbous, again depressed before apical gibba; entirely black; ocelli much nearer to eyes; tegmina black, opaque, veins pilose, four linear white fasciæ at various angles; 3.4 × 1.7 mm. **maculipennis**
- 14(1). Apex of posterior process acute, not gibbously elevated, shorter than apex of clavus, dorsum straight, rarely lightly concavely depressed; ocelli equidistant.
- 15(22). Dorsum of posterior process straight, apex not elevated.
- 16(19). Head and pronotum black, tibiæ and tarsi yellowish.

- 17(18). Tegmina semihyaline, angular basal area brown, apical cells paler; 4×1.5 mm. **modesta**
- 18(17). Tegmina pale ochraceous subhyaline, extreme base indigo black, median whitish fascia, extreme apical margin darker; pronotum indigo black, posterior process robust; 4.5-5.5 mm. **nilgiriensis**
- 19(16). Pronotum brown, apex of posterior process black, legs brown.
- 20(21). Pale tawny brown, pilose, not granulose, posterior process slender; tegmina gray and brown mottled especially basal and costal areas and two cellular spots beyond middle; 4×1.5 mm. **rustica**
- 21(20). Dark castaneous, pronotum finely granulose, posterior process robust; tegmina brownish ochraceous with virescent suffusions, base and oblique median fascia dark castaneous; 4 mm. **margherita**
- 22(15). Posterior process distinctly concave, slender, apex curved upward; entirely brown, pronotum granulose, tibiae and tarsi ochraceous; tegmina greenish, broad basal area, median fascia, large spot near apex of clavus, and dots on apical area brown; 4×2 mm. **dissimilis**

LIST OF SPECIES

- atricapilla** Distant, Faun. Brit. Ind. vi, Append. p. 179. (1916). Nilgiri Hills, India.
- affixa** Distant, Faun. Brit. Ind. vi, p. 178, fig. 135. (1916). Nilgiri Hills, India.
- affinis** Distant, Faun. Brit. Ind. vi, Append. p. 179. (1916). Nandidrug, India.
- elegantula** Distant, Faun. Brit. Ind. vi, Append. p. 178, fig. 134. (1916). Nilgiri Hills, Ootacamund, Somerdale, Kodaikanal, India.
- maculosa** Distant, Faun. Brit. Ind. vi, Append. p. 177, fig. 133. (1916). Nandidrug, Kodaikanal, India.
- typica** Distant, Faun. Brit. Ind. vi, Append. p. 177, fig. 132. (1916). Kodaikanal, India.
- maculipennis** Funkhouser, Jour. Sts. Br. Roy. Asiat. Soc. p. 224. (1920). Sandakan, Borneo.
- modesta** Distant, Faun. Brit. Ind. vi, Append. p. 181. (1916). Nilgiri Hills, India.
- nilgiriensis** Distant, Faun. Brit. Ind. vi, Append. p. 180. (1916). Nilgiri Hills, India.
- rustica** Distant, Faun. Brit. Ind. vi, Append. p. 181, fig. 138. (1916). Lovedale, Nilgiri Hills, India.
- margherita** Distant, Faun. Brit. Ind. vi, Append. p. 180, fig. 137. (1916). Assam, Margherita, India.
- dissimilis** Distant, Faun. Brit. Ind. vi, Append. p. 179, fig. 136. (1916). Kodaikanal, India.

Yasa

Distant, Fauna British India, iv, p. 74. (1908).

KEY TO SPECIES

One black species, tibiæ and tarsi ochraceous; posterior process slender, slightly separated from scutellum, straight, tip reaching middle of clavus and decurved; tegmina subhyaline, base black, oblique piceous fascia transversely branching to inner margin beyond apex clavus; 6×2.5 mm. **greeni**

LIST OF SPECIES

greeni Distant, Faun. Brit. Ind. iv, p. 74, fig. 62. (1908). Peradeniya, Kandy, Ceylon.

Kanada

Distant, Fauna British India, iv, p. 74. (1908).

KEY TO SPECIES

One pilose ochraceous species, head, foveate spot above each eye, tip of posterior process and chest black; median carina obsolete anteriorly; tegmina grayish hyaline; 3.5 mm. **irvinei**

LIST OF SPECIES

irvinei Distant, Faun. Brit. Ind. iv, p. 75, fig. 63. (1908). Ranchi, Bengal, India.

Insitor

Distant, Fauna British India, vi, Appendix, p. 176. (1916).

KEY TO SPECIES

One brown species with ochraceous legs; tegmina grayish, large brownish yellow basal area, broad median fascia and claval spot black; 3.5-4 mm. **exemplificatus**

LIST OF SPECIES

exemplificatus Distant, Faun. Brit. Ind. vi, Append. p. 176, fig. 131. (1916). Nilgiri Hills, India.

*Gargarini***Sipylyus**

Stal, Analect. Hemipt. p. 387. (1866).

KEY TO SPECIES

- 1(6). Veins of tegmina not nodulate; pronotum without dorsal tubercles.
 2(5). Tips of humerals blunt, posterior process straight, robust.
 3(4). Posterior process unicarinate, apex abruptly acute; ferruginous brown, ♂ black anteriorly; tegmina ferruginous semiopaque, with two discoidal cells, subhyaline in ♂; $4.5 \times 3.5-4$ mm. **crassulus**
 4(3). Posterior process tricarinate, apex gradually acute; golden brown, pronotum gibbous between humerals; tegmina smoky hyaline, base black, with three discoidal cells; 7×4.7 mm. **rotundatus**

- 5(2). Humerals acuminate, oblique, lightly inclined forward, tips acute; pronotum black, body and legs brown, pilose, posterior process slender, tip deflexed; tegmina amber hyaline, base black; 6.5×4 mm. **acuticornis**
- 6(1). Tegmina subhyaline, veins with prominent brown nodules; ferruginous brown, tips of humerals blunt, a large tubercle behind each humeral, posterior process short, broad, apex abruptly acute; $3-3.5 \times 2.75-3.5$ mm. **dilatatus**

LIST OF SPECIES

- crassulus** Stal, Eug. Resa Omk. J. Zool. p. 285. (1859); Funkhouser, Phil. Jour. Sci. x, p. 391, pl. 2, fig. 14. (1915). Mt. Banahao, Davao, Mindanao, Philippines; Java; Malacca.
- rotundatus** Funkhouser, Phil. Jour. Sci. xxxiii, p. 118, pl. 4, fig. 23, 24. (1927). Mt. Banahao, Trinidad, Haight's Place, Sarai, Luzon, Philippines.
- acuticornis** Funkhouser, Phil. Jour. Sci. xiii, p. 30, pl. 1, figs. 9, 10. (1918). Nueva Viscaya, Imugan, Luzon, Philippines.
- dilatatus** Walker, List Hom. Brit. Mus. p. 630. (1851). Philippines.
nodipennis Funkhouser, Jour. Ent. Zool. vi, p. 72, fig. 5. (1914); Phil. Jour. Sci. x, p. 392, pl. 2, fig. 15. (1915); Biol. Memb. pl. 35, fig. 17. (1917). Los Baños, Davao, Mindanao, Philippines; Singapore; Sandakan, Borneo.

Centrotoscelus

- Funkhouser, Journal Entomology and Zoology, vi, p. 72. (1914).

KEY TO SPECIES

- 1(4). Metopidium without a median carina; pronotum dark brown, posterior process short, reaching apex of clavus.
- 2(3). Posterior process uncarinate tip depressed, dorsum concavely depressed, broad central black stripe on metopidium; ♂ black; tegmina subtranslucent pale yellow, irregular brown median fascia; 5×2.3 mm. **concausus**
- 3(2). Posterior process tricarinate, dorsum straight, tip black not depressed; tegmina ferruginous hyaline, narrow subbasal area pale, costal area and tips brown; 5.7×2.8 mm. **brevispinus**
- 4(1). Median carina of pronotum percurrent, sometimes obsolete anteriorly; posterior process uncarinate, passing apex of clavus.
- 5(8). Tegmina with brown markings; pronotum ferruginous brown, median carina obsolete anteriorly, dorsum depressed above scutellum, straight on posterior process.
- 6(7). Tegmina subhyaline, base, median fascia and part of apical margin brown; tip of posterior process depressed; tarsi yellowish; $4.3-5 \times 2.2-2.5$ mm. **typus**

- 7(6). Tegmina translucent ferruginous, iridescent, base, one-fourth of apical cells and apical margin brown; legs brown; tip posterior process straight; 4.8×2.6 mm. **borneensis**
- 8(5). Tegmina yellow hyaline; head brown; pronotum yellow, median carina percurrent, posterior process straight, tip brown; body black, legs ferruginous yellow; 5×2.5 mm. **luteus**

LIST OF SPECIES

- concaus** Funkhouser, Phil. Jour. Sci. xiii, p. 31, pl. 1, figs. 11, 12. (1918). Benguet, Nueva Viseaya, Imugan, Luzon, Philippines; Bettotan, N. Borneo.
- brevicornis** Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 216, figs. 11, 12. (1920). Sandakan, Borneo.
- typus** Funkhouser, Jour. Ent. Zool. vi, p. 73, figs. 3, 4. (1914); Phil. Jour. Sci. x, p. 392, pl. 2, fig. 16. (1915). Los Baños, Luzon, Philippines.
- borneensis** Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 215, figs. 9, 10. (1920). Sandakan, Borneo.
- luteus** Funkhouser, Phil. Jour. Sci. xiii, p. 30. (1918). Benguet, Bagnio, Luzon, Philippines.

Subrincator

- Distant, Ann. Mag. Nat. Hist. xvii, p. 157. (1916).

KEY TO SPECIES

One black species, median carina, lateral margins and curved fascia each side of pronotal disk, a transverse median fascia and apical area of posterior process, tips of femora and bases and tips of tibiæ sanguineous; tegmina subhyaline, base black with sanguineous spots, spots on central area and on apical margin black; 9-10 mm. **tonkinensis**

LIST OF SPECIES

- tonkinensis** Distant, Ann. Mag. N. H. xvii, p. 157. (1916). Lao Kay near Chapa, Upper Tonkin, French Indo-China.

Gargara

- Amyot and Serville, Hemip. p. 537. (1843); *Xanthostieta* Buckton, Mon. Memb. p. 63. (1903), part; *Mærops* Buckton, Mon. Memb. p. 257. (1903).

KEY TO SPECIES

- 1(52). Tegmina back, brown, yellow or hyaline except bases, destitute of fascia or spots.
- 2(9). Tegmina black, opaque; pronotum black, rarely partly red, tarsi yellowish.
- 3(6). Veins of tegmina bearing nodules or granules.

- 4(5). Pronotum finely punctate, no median carina anteriorly, posterior process slender, straight, median carina strong; 5×4 mm. **nigra**
- 5(4). Pronotum rough, median carina strongly percurrent, posterior process moderately sinuate; 3×1.5 mm. **rugonervosa**
- 6(3). Veins of tegmina destitute of nodules or granules.
- 7(8). Pronotum entirely black, median carina percurrent, hind tibiae and tarsi reddish; 5 mm. **minuscula**
- 8(7). Pronotum black with a ring in front, and apical two-thirds of posterior process red, the two united; legs black; 6 mm. **dauidi**
- 9(2). Tegmina not black.
- 10(17). Tegmina brown or yellow, opaque or subopaque.
- 11(16). Tegmina brown, destitute of nodules or granules.
- 12(15). Median carina of pronotum absent anteriorly; pronotum not black.
- 13(14). Pronotum entirely brown with long white fasciate pubescence; veins of tegmina very hairy; 3.7×2.5 mm. **triangulata**
- 14(13). Pronotum brown, metopidium and dorsum ochraceous; 3×2 mm. **trivialis**
- 15(12). Median carina weakly percurrent; pronotum black, yellow pubescent; veins of tegmina testaceous with testaceous margins; 5 mm. **venosa**
- 16(11). Tegmina yellow or vinaceous, veins bearing thick brown nodules except on the base; pronotum body and legs yellow; pronotum tuberculate, white line from middle of front margin branched above and below each humeral, dark spot above each eye, median carina obsolete, tip of posterior process brown abruptly acuminate; $4-4.5 \times 2-2.5$ mm. **tuberculata**
- 17(10). Tegmina hyaline or subhyaline, or pale vinaceous.
- 18(27). Veins of tegmina bearing nodules or granules.
- 19(26). Median carina of pronotum obsolete anteriorly, acute posteriorly.
- 20(23). Humerals large, blunt.
- 21(22). Pronotum pale brown, densely pubescent, smooth black spot above each eye, posterior process sinuate, tip acute; body and legs brown; 4×2.2 mm. ♀ **granulata**
- 22(21). Pronotum, body and legs black, tarsi yellow; 4×2 mm. ♂ **granulata**
- 23(20). Humerals not prominent; pubescent.
- 24(25). Pronotum black, median carina of posterior process at middle and legs yellowish, margins abdominal segments brown; 4 mm. **horishana**
- 25(24). Pronotum brown, base, vertex and body blackish, legs brownish yellow; 5 mm. **tappana**

- 26(19). Median carina of pronotum strongly percurrent, humerals large auriculate, dorsum arcuate, posterior apex blunt; pale brown, densely white pubescent, margins abdominal segments white above **grisea**
- 27(18). Veins of tegmina destitute of nodules or granules.
- 20(49). Median carina of pronotum obsolete or absent anteriorly.
- 29(48). Posterior pronotal process unicarinate.
- 30(39). Pronotum black or brown.
- 31(36). Tegmina yellowish or brownish hyaline; posterior process gradually acuminate; head inflexed.
- 32(35). Pronotum and legs brown or piceous brown, posterior process moderately sinuate median carina weak, tip decurved.
- 33(34). Apex of posterior process reaching middle of abdomen; hairy; 5 mm. **genistæ**
- 34(33). Apex of posterior process passing inner angle of tegmina; 3.7 × 2 mm. **brunnea**
- 32(32). Pronotum black, median carina posteriorly, tips femora, tibiae and tarsi yellowish; posterior process narrow, median carina sharp, apex lightly elevated; 4.5 × 2 mm. **sumbawæ**
- 36(31). Tegmina clear hyaline.
- 37(38). Head inflexed from base; pronotum black, no median carina, posterior process with margins parallel to middle, abruptly acuminate; legs black to whitish; 4 × 2 mm. ♂ **varicolor**
- 38(37). Head projecting forward from base; pronotum brown thickly yellow pubescent; posterior process gradually acuminate from base; median carina distinct; tips tarsi yellow; 5 × 2.3 mm. **projecta**
- 39(30). Pronotum entirely or partly yellow, or greenish gray.
- 40(47). Pronotum and legs yellow, apex of posterior process black or brown; scutellum well exposed.
- 41(44). Pronotum finely granulose, base of posterior process sinuate.
- 42(43). Body and legs yellow, disk of chest piceous; tegmina brownish yellow; 4.5 mm. **citrea**
- 43(42). Body blackish, femora castaneous except tips; tegmina subhyaline; 4 mm. **contraria**
- 44(41). Pronotum not granulose, posterior process straight.
- 45(46). Pronotum lemon yellow, finely punctate, slightly pubescent, body black, abdomen and head yellow, apex of posterior process black straight; 5 × 2.4 mm. ♀ **nigroapica**
- 46(45). Pronotum yellow, metopidium brown, coarsely punctate, foveate dark spot above each eye, broad pale stripe above each humeral, apex of posterior process brown, depressed; body and legs brown, head black; tegmina iridescent hyaline; 3.5–5 × 1.5 mm. ♀ **nitidipennis**
- 47(40). Pronotum greenish gray, not pubescent, posterior process lightly depressed lightly sinuate, nearly covering scutellum; body and legs greenish brown; 4 × 2 mm. **fragilla**

- 48(29). Posterior process tricarinate, high, tectiform, lightly sinuate near base, sides parallel to middle, abruptly acuminate; black, yellow pubescent, tibiæ and tarsi ferruginous; 3.5×1.8 mm.

nigrocarinata

- 49(28). Median carina of pronotum distinctly percurrent, tip of posterior process reaching apex of clavus.

- 50(51). Pronotum dark brown, pubescent, white tomentose patch each side, body and abdomen concolorous, legs brownish white (? posterior process unicarinate); 4.8×2.1 mm.**akonis**

- 51(50). Pronotum black, pale pilose, central area of posterior process, sometimes median carina, ferruginous, body and abdomen black, tibiæ and tarsi ochraceous; $4-4.5 \times 5.2$ mm.

flavolineata

- 52(1). Tegmina marked with stripes, bands or spots.

- 53(128). Tegmina with stripes or bands.

- 54(61). Tegmina with one or more longitudinal stripes.

- 55(60). Median carina absent or obsolete anteriorly.

- 56(57). Posterior process straight, tricarinate, reaching apex of clavus, pronotum black, legs brown; tegmina clear hyaline, base and stripe along costal margin brown; 3 mm.**sœrcelangœna**

- 57(56). Posterior process unicarinate; ocelli near eyes; tegmina yellowish opaque or subopaque.

- 58(59). Robust, head black, pronotum brown with no median carina, metopidium with two spot on base and large spot each side of disk blackish; posterior process bisinuate decurved far passing apex of clavus; tegmina with central longitudinal dark stripe, veins with blackish nodules, base of exterior discoidal cell petiolate; ♂ black, tip of posterior process brown; 3.5×2 mm.

parvula

- 59(58). Slender, entirely yellow, median carina obsoletely percurrent, dorsum of posterior process lightly arched reaching apex clavus; veins of tegmina smooth and narrowly brown margined; 4×2.5 mm.**luteipennis**

- 60(55). Median carina distinctly percurrent, pronotum black, granulose, thickly pilose, legs ochraceous; tegmina subhyaline, costal and apical margins black; 5×2.5 mm.**extrema**

- 61(54). Tegmina with transverse bands or fasciæ.

- 62(75). Veins of tegmina bearing nodules or granules.

- 63(68). Median carina of pronotum percurrent, pronotum and body black, more or less pubescent.

- 64(67). Apex of posterior process not passing apex of clavus; tegmina hyaline with one or two median brown bands.

- 65(66). Median carina weak anteriorly, dorsum of posterior process depressed near base then lightly convex; pronotum dark brown, tibiæ and tarsi yellow, tegmina longer than abdomen, veins slightly nodulate near base, and pilose; 3.6×1.7 mm.

pilinervosa

- 66(65). Median carina distinctly percurrent, pronotum black, pubescent, posterior process lightly convexly elevated before acute apex; tegmina long as abdomen, veins near base with some large red granules; tibiæ and tarsi reddish; 3.25 mm. **rubrogranulata**
- 67(64). Apex of posterior process passing apex of clavus, blunt; pronotum black, femora brown, tibiæ and tarsi yellow; tegmina hyaline with two brown fasciæ, veins pubescent with small black nodules; 4×1.7 mm. **nodipennis**
- 68(63). Median carina of pronotum obsolete or absent anteriorly; tegmina with one brown or black band.
- 69(74). Pronotum brown or black, dorsum of posterior process arcuate.
- 70(73). Tegmina hyaline, veins distinctly nodulate or granulate; apex of posterior process acute; body gray pubescent; band of tegmina brown or black.
- 71(72). Posterior process not reaching apex of clavus, pronotum black, tips of tibiæ and tarsi brownish yellow; tegmina hyaline, oblique band forked at hind margin, in ♂ black apical third hyaline; 3.5×4 mm. **♀ arisana**
- 72(71). Posterior process passing apex of clavus; pronotum and legs black, tarsi yellow; veins of tegmina pilose; 3.2×2 mm. **♂ nodinervis**
- 73(70). Tegmina brown, opaque, pilose, transverse band and tips hyaline, veins with brown nodules; pronotum brown, pubescent, two white fasciæ above humerals, apex posterior process blunt, decurved, passing apex of clavus; legs brown; 3.6×2 mm. **albolinea**
- 74(69). Entirely yellow, posterior process lightly sinuate; otherwise as in "72(71)"; 4×2 mm. **♀ nodinervis**
- 75(62). Veins of tegmina destitute of nodules or granules.
- 76(101). Median carina of pronotum percurrent.
- 77(92). Posterior process unicarinate.
- 78(87). Pronotum brown or black.
- 79(84). Tegmina clear or vinaceous hyaline with one transverse band.
- 80(83). Tips of tegmina colorless; posterior process acuminate.
- 81(82). Entirely black, pubescent, posterior process depressed at base and apex; tegmina clear hyaline, base, spot near apex of clavus, and subapical band, with legs, black; 4×2 mm. **nigromaculata**
- 82(81). Pronotum brown, pubescent, black in front, posterior process sinuate; tegmina vinaceous hyaline, iridescent, narrow brown median fascia; 3×1.5 mm. **♀ gracila**
- 83(80). Tegmina hyaline, irregular subapical band and tips fuscous brown; pronotum brown, posterior apex abruptly acute, black, sides of chest piceous, legs pale testaceous; 5×2 mm. **myittæ**
- 84(79). Tegmina subhyaline or opaque with two or more transverse bands, apical margin fuscous.

- 85(86). Tegmina subhyaline, pale median fascia, a subapical band and apical margin fuscous; pronotum black, pilose, central area of posterior process and legs ochraceous, posterior apex abruptly acute; 5×2.3 mm. **sikhimensis**
- 86(85). Tegmina fuscous or blackish, opaque, three transverse bands separated by white more or less confluent and checkered; pronotum ferruginous, tip of posterior process bluntly tectiform just passing apex of clavus; 4×2 mm. **pulchripennis**
- 87(78). Pronotum yellowish or greenish.
- 88(89). Tegmina hyaline, base broadly and median fascia brown; pronotum brownish yellow; slender, spot above each eye and broad stripe above each humeral brown, posterior process slender, sinuate, tip depressed; 3.8×1.7 mm. **fasceifrontis**
- 89(88). Tegmina with two or more transverse bands.
- 90(91). Pronotum yellow, mark each side of median line and one above each eye brown, posterior process sinuate, tip brown; body brown, legs yellow; tegmina opaque with alternating brown and white bands, tips slightly hyaline; ♂ smaller cinnamon yellow, markings darker, tegmina black at base; 3.2×1.7 mm.
- irrorata**
- 91(90). Pronotum greenish brown, pubescent, brown line above each eye, posterior process flat, tip black; body and legs brown; tegmina subhyaline, median and subapical bands brown, veins pilose; 4.2×2.3 mm. **virescens**
- 92(77). Posterior process tricarinate; black or brown.
- 93(98). Apex of posterior process not reaching apex of clavus.
- 94(97). Tegmina subhyaline with one transverse band.
- 95(96). Pronotum and abdomen below reddish brown, pubescent, head, metopidium, lateral carinae and apex of posterior process black, legs yellowish; tegmina with base and costal margin reddish, a white subbasal white transverse band; 4 mm. **nigriceps**
- 96(95). Pronotum and body piceous, fine pilose, median carina weak, legs ochraceous; tegmina with base piceous, transverse median band and broad apical margin ochraceous; $5.5-6.6 \times 3$ mm.
- tumida**
- 97(94). Tegmina long as abdomen, pale smoky, median band from costa, another to central area, and tips brown, hyaline spot beyond base; pronotum reddish brown, pubescent, face, metopidium and posterior apex black, its carina elevated; body black; 4.4 mm. **indica**
- 98(93). Apex of posterior process passing apex of clavus; tegmina hyaline or subhyaline.
- 99(100). Castaneous brown, pilose, median fascia on metopidium; tegmina with base and broad transverse median band piceous brown; 4×2 mm. **delimitata**

- 100(99). Black, body and legs piceous, tarsi yellowish, pronotum granu-
lose; tegmina with base, median fascia obliquely continued
and on upper half of apical margin black; 5.5-6 × 3 mm. *rivulata*
- 101(76). Median carina of pronotum obsolete or absent anteriorly, pro-
notum brown or black.
- 102(121). Tegmina with one transverse band.
- 103(114). Apex of posterior process reaching or just passing apex of
clavus.
- 104(113). Tegmina with tips and apical margin concolorous, not brown.
- 105(106). Tegmina amber hyaline, base and irregular subapical band
brown; pronotum brown, thickly pubescent, posterior process
constricted at base, middle strongly swollen and carinate, ab-
ruptly narrowed to apex; tips tibiæ and tarsi yellow; 4.5 ×
2.1 mm. *penangi*
- 106(105). Tegmina vitreous or hyaline.
- 107(108). Corium with three discoidal cells, tegmina broadly opaque at
base and subapical band brown; pronotum brown, densely
pubescent, black spot above each eye, apex of posterior
process black, blunt, higher than base, scutellum well ex-
posed; 7 × 3 mm. *orientalis*
- 108(107). Corium with two discoidal cells.
- 109(110). Posterior process acuminate from base, slender, pronotum brown,
pubescent, base, vertex, and apex of posterior process blackish,
legs yellowish brown; tegmina dark clouded with broad median
band brown; 3.5 mm. *zonata*
- 110(109). Posterior process with sides parallel to middle then acuminate.
- 111(112). Pronotum dark ferruginous, anteriorly and posterior apex black-
ish, abdomen piceous margins yellowish; tegmina subhyaline,
arcuate brown band on apical third; 4.5 mm. *malaya*
- 112(111). Color variable from black to yellowish ferruginous, the paler
forms with spots or bands on posterior process; tegmina with
fuscous band behind middle, apical area yellowish; 4.5 × 2 mm.
♀ *varicolor*
- 113(104). Tegmina hyaline, a subbasal spot, subapical band and tips
brown; entirely black; 2.25 mm. *semifascia*
- 114(103). Apex of posterior process distinctly passing apex of clavus.
- 115(120). Tegmina opaque, brown or blackish.
- 116(119). Transverse band of tegmina hyaline or white.
- 117(118). Tegmina piceous, spot on clavus and transverse fascia creamy
white, apical area hyaline; pronotum piceous, pilose, posterior
process broad, sides parallel to middle then acuminate, legs
yellowish; 3 mm. *alboapicata*
- 118(117). Tegmina brown, broad central band and apical margin hyaline;
pronotum pale brown, pubescent, posterior process sinuate,
decurved; tomentose below; 3.5 × 2 mm. *hyalifascia*

- 119(116). Tegmina dark translucent, median band and spot behind clavus brown; pronotum blackish brown, densely pubescent, legs brown; 4.8×2.5 mm. **sordida**
- 120(115). Tegmina vitreous, base and median band black (variable); black, posterior process narrow; 3.3×1.5 mm. **nigrofasciata**
- 121(102). Tegmina with two or more transverse bands.
- 122(127). Corium with two discoidal cells.
- 123(126). Apex of posterior process passing apex of clavus.
- 124(125). Brown, pubescent, darker on metopidium and posterior apex, median carina absent anteriorly, posterior process depressed at base and blunt tip; tegmina hyaline, subbasal and median bands brown; 4.7×2.4 mm. **nervosa**
- 125(124). Black, legs sordid yellow; tegmina with two irregular bands and subapical spot black; 2.25 mm. **consocia**
- 126(123). Apex of posterior process reaching apex of clavus, acute; brown, pubescent, metopidium, body and femora blackish, legs yellowish; tegmina white hyaline, two broad median bands and apical third brown; 6 mm. **lagustri**
- 127(122). Corium with three discoidal cells, tegmina brown, basal half coriaceous, apical half hyaline, median and subapical bands brown, the median band touching the basal color at middle; pronotum golden brown, densely pubescent, metopidium darker, posterior process tectiform, tip darker reaching apex of clavus; scutellum slightly exposed; 3.2×1.5 mm. **semibrunnea**
- 128(53). Tegmina with spots, destitute of transverse bands.
- 129(132). Veins of tegmina bearing nodules or granules; apex of posterior process not passing apex of clavus.
- 130(131). Tegmina subhyaline, brown clouded, whitish at middle and tips; pronotum dark brown, pubescent, ♀ with two pale brown stripes on metopidium; legs yellowish; 3.5 mm. **guttulinervis**
- 131(130). Tegmina brown, large spot near apex of clavus and broad curved subapical spot whitish hyaline; pronotum black, posterior process much shorter than apex of clavus, legs brown; 4 mm. **kawakamii**
- (The ♂ *arisana* belongs here, see "71(72)")
- 132(129). Veins of tegmina destitute of nodules or granules.
- 133(170). Median carina of pronotum percurrent, sometimes weak.
- 134(145). Posterior process tricarinate.
- 135(144). Apex of posterior process distinctly passing apex of clavus.
- 136(141). Tegmina with more than basal half opaque brown or black; pronotum brown or black.
- 137(140). Basal opaque area of tegmina black.
- 138(139). Posterior process sinuate and strongly elevated apical half distant from tegmina apex abruptly acute; costal margin of tegmina ferruginous, apical fourth hyaline; black, tibiae ferruginous, tarsi yellow; 3×1.4 mm. **sinuata**

- 139(138). Posterior process straight impinging upon tegmina, acuminate, metopidium gibbous; entirely black; apical area of tegmina hyaline; 5.2×2.3 mm. ♂ **bicolor**
- 140(137). Tegmina opaque brown mottled with black and ferruginous, tips rounded, ferruginous; pronotum blackish brown, posterior process weakly sinuate, scutellum well exposed; body and legs brown, densely pubescent; 6.6×3.4 mm. **lata**
- 141(136). Tegmina hyaline or subhyaline, not opaque.
- 142(143). Tegmina pale bronzy ochraceous, base black; entirely black; 8×4 mm. **majuscula**
- 143(142). Tegmina vinaceous translucent, base narrowly opaque brown; reddish brown darker above, legs pale yellow; 5×2.2 mm. ♀ **bicolor**
- 144(135). Apex of posterior process about as long as apex of clavus, pronotum purplish brown or black, legs brown; tegmina subhyaline, spot near apex of clavus and apical margin brown, sometimes fuscous spots on apical half; $3.5-4 \times 2$ mm. **robusta**
- 145(134). Posterior process uncarinate.
- 146(161). Apex of posterior process distinctly passing apex of clavus.
- 147(150). Median carina of pronotum yellow or reddish, posterior process more or less sinuate.
- 148(149). Black, median carina and tips femora reddish; posterior process broadened at middle, apex acute; tegmina fuscous brown, gray mottled, apical margin gray; 6×2.5 mm. **cælata**
- 149(148). Brown, not pubescent, base and central stripe on metopidium black, median carina yellow, posterior process depressed and yellow at base, tip black; tegmina smoky hyaline, brown cloud covering central area, tips hyaline; $4-4.5 \times 1.7$ mm. **flavocarinata**
- 150(147). Median carina of pronotum concolorous, not yellow or red.
- 151(160). Tegmina opaque or semiopaque.
- 152(157). Apical area of tegmina hyaline; posterior process distinctly passing apex of clavus; legs brown.
- 153(156). Posterior process sinuate; pronotum black, tarsi paler.
- 154(155). Tegmina brown, opaque, base and costal area black, veins hairy, tips yellow hyaline; 3×1.7 mm. **luconica**
- 155(154). Tegmina with basal two-thirds black, opaque, apical third hyaline; 2.75×1.5 mm. ♂ **gracila**
- 156(153). Posterior process straight, tip decurved, apical area paler, pronotum dark brown marked with black; tegmina very dark, subopaque, tips smoky hyaline; 4.2×2.1 mm. **pinguis**
- 157(152). Apical area of tegmina black or brown, not hyaline; posterior process not passing apex of clavus.
- 158(159). Black, slightly pilose, legs yellowish; tegmina opaque gray, apical area, spot near apex clavus and apical margin fuscous brown; 4×2 mm. **confusa**

- 159(158). Brown, densely yellow pilose; pronotum with spot above each eye, two central stripes and apical area black; tegmina dark ochraceous black mottled except tips; 5×2.5 mm. **mixta**
- 160(151). Tegmina subhyaline, large central fuscous or black spot; dark brown to black, legs paler, posterior process sinuate, sides parallel apex abruptly acute; $4-5 \times 1.7-2.5$ mm. **patruelis**
- 161(146). Apex of posterior process not passing apex of clavus or shorter.
- 162(169). Tegmina dark brown and hyaline, or whitish hyaline, not hairy.
- 163(164). Tegmina black or dark brown, apical fourth hyaline; pronotum blackish, gray pubescent, median carina obscure anteriorly, posterior process acuminate; tarsi tawny; 3 mm. **pygmæa**
- 164(163). Tegmina whitish hyaline or subhyaline.
- 165(168). Tips of tegmina brown; brown or black, yellow pubescent, sides white tomentose, legs yellowish; brown.
- 166(167). Posterior process much shorter than clavus; coarsely punctate; tegmina with tips only brown; $5-5.5$ mm. **garampina**
- 167(166). Posterior process passing apex of clavus, pronotum dark brown or black, finely punctate, dorsum depressed at middle; tegmina with base, middle of costal margin, apex and spot behind clavus and part of interior margin brown; 4×1.8 mm. **maculipennis**
- 168(165). Tegmina thickly sprinkled with rust yellow, basal area brown with a row of white dots and sometimes another central row, subapical row of black dots, apical area hyaline; black, legs brown; 3×2 mm. **apicata**
- 169(162). Tegmina vinaceous covered with long hairs, veins indistinct, base black, tips hyaline; pronotum dark brown densely pilose, tip of posterior process slightly elevated to apex of clavus; legs yellow; 4×2 mm. **pilosa**
- 170(133). Median carina of pronotum obsolete or absent anteriorly.
- 171(190). Posterior process unicarinate, reaching or passing apex of clavus.
- 172(183). Tegmina hyaline or vinaceous hyaline.
- 173(180). Pronotum and body black or brown.
- 174(177). Tips of tegmina hyaline, legs yellow.
- 175(176). Tegmina dark yellow hyaline, basal fourth piceous, spot on first apical cell and apical margins abruptly colorless hyaline; pronotum piceous; 2.5×1 mm. **discrepans**
- 176(175). Tegmina subhyaline yellow clouded, base black, brown at middle; pronotum black, densely pubescent; $5.5-6$ mm. **donitzæ**
- 177(174). Tips of tegmina brown or black; legs black or ferruginous; apex of posterior process distinctly passing apex of clavus.
- 178(179). Pronotum dark brown, black curved line above each eye, posterior process with slight median carina, apex decurved abruptly acute; legs ferruginous; tegmina subhyaline, base not punctate, ferruginous clouded near middle, tips fuscous, veins hairy; 3.4×1.5 mm. **attenuata**
- 179(178). Entirely black; tegmina hyaline, apical third deeply black clouded; 4×2 mm. ♂ **nigroapica**

- 180(173). Pronotum not black or brown.
- 181(182). Head and pronotum pale silky pilose, two central castaneous discal stripes a piceous line each side, tips of humerals, apex of posterior process and body piceous; legs yellow; 4×2 mm.
sericea
- 182(181). Pronotum yellow, no median carina anteriorly, broad fasciæ on metopidium and tip posterior process brown; head black, legs brown; tegmina iridescent hyaline, brown patch behind middle; 3.5×1.4 mm. ♂ *nitidipennis*
- 183(172). Tegmina entirely or one-half or more opaque brown or black.
- 184(187). Posterior process sinuate; three-fourths or all of tegmina opaque brown.
- 185(186). Tegmina brown with numerous white spots, veins indistinct; entirely black, pubescent, scutellum well exposed; 2.8×1.6 mm.
ornata
- 186(185). Basal three-fourths of tegmina opaque brown, apical fourth hyaline with transverse series of black dots, apical margin brown; pronotum brown with three silky discal lines, body black, legs testaceous; 4.5 mm. *trinotata*
- 187(184). Posterior process straight, pronotum black, not pubescent; apical half of tegmina opaque black or brown.
- 188(189). Apical half of tegmina opaque black, basal half hyaline; apex of posterior process passing apex of clavus; 3 mm.
semivitreæ
- 189(188). Apical half of tegmina opaque brown, basal half hyaline; median dorsal line of pronotum broadly brown, apex of posterior process reaching apex of clavus, legs brown, tarsi yellowish; 3.6×1.8 mm. *brunneidorsata*
- 190(171). Posterior process tricarinate; pronotum shining black.
- 191(192). Tegmina with basal two-thirds black enclosing large trifoliate white spot, apical third yellow hyaline, tips fuscous; posterior process thick at base, apex far passing apex of clavus; 8×4 mm. *trifoliata*
- 192(191). Tegmina reddish subopaque, base black, tips subhyaline; posterior process narrow at base, apex reaching apex of clavus; $2.5-3 \times 1.4-1.6$ mm. *minuta*

LIST OF SPECIES

- nigra* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 223. (1920). Sandakan, Banguay, Borneo.
- rugonervosa* Funkhouser, Phil. Jour. Sci. xiii, p. 34. (1918). Neuva Visaya, Panay, Imugan, Culasi, Luzon, Philippines; Sandakan, Borneo.
- minuscule* Walker, Jour. Linn. Soc. x, p. 191. (1868). Mysol; Sula, East Indies.

- dauidi* Fallou, Rev. Ent. ix, p. 354. (1891). Pekin, China; Siberia; Europe.
- triangulata* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 12. (1918). Singapore; Penang, East Indies.
- trivialis* Buckton, Mon. Memb. p. 64, pl. 10, fig. 1. (1903). Luzon, Philippines.
- venosa* Walker, Jour. Linn. Soc. x, p. 189. (1868). Tondano, Posse See, Samango, Duri, Celebes Is.
- tuberculata* Funkhouser, Jour. Ent. Zool. vi, p. 70, fig. 6. (1914). (tegmen). Los Baños, Manila, Tayabas, Malinao, Luzon, Davao, Zamboango, Mindanao, Philippines; Penang, Straits Settlements.
- granulata* Funkhouser, Phil. Jour. Sci. xxxiii, p. 123, pl. 4, fig. 30. (1927). Kolamougan, Mindanao; Imugan, Luzon, Philippines.
- horishana* Matsumura, Annot. Zool. Jap. viii, p. 25. (1912). Horisha, Is. Formosa.
- tappana* Matsumura, Annot. Zool. Jap. viii, p. 23. (1912). Tappan, Horisha, Formosa.
- grisea* Funkhouser, Phil. Jour. Sci. xv, p. 25. (1919). Manila, Luzon, Philippines.
- genistæ* Fabricius, Spec. Ins. ii, p. 314. (1781). Europe generally; Hokkaido, Honshu, Kinshu, Ogasawari, Japan; Osnatschnaja, Jenissej R., Jenissejsk, Vladivostok, Ussuri region, Siberia; New Jersey, Connecticut, U. S. A.
- brunnea* Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 235, pl. 6, fig. 2. (1914). Mt. Makiling, Luzon, Philippines.
- sumbawæ* Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 237, pl. 6, fig. 6. (1914) Sumbawæ Is., Java.
- varicolor* Stal, ♂, Hemip. Philip. p. 728. (1870); Funkhouser, Phil. Jour. Sci. xxxiii, p. 124. (1927). Los Baños, Mt. Maquiling, Mt. Banahao, Davao, Mindanao; Manila, Rizal, Montalban, Luzon, Philippines; Sandakan, Borneo.
- projecta* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 10. (1918). Penang, Singapore.
- citrea* Distant, Faun. Brit. Ind. iv, p. 63. (1908). Tenasserim, Myitta, India; Moulmein, Burma; Sandakan, Borneo.
- contraria* Distant, Faun. Brit. Ind. vi, Append. p. 170. (1916). Punjab, Lahore, India.
- nigroapica* Funkhouser, (♀), Phil. Jour. Sci. xxxiii, p. 119, pl. 4, fig. 25. (1927). Puerta Princessa, Palawan, Philippines.
- nitidipennis* Funkhouser, (♀), Jour. Ent. Zool. vi, p. 71. (1914). Los Baños, Davao, Mt. Maquiling, Mt. Banahao, Iligan, Dapitan, Butuan, Paete, Bagnio, Benguet, Panay, Culasi, Philippines; Singapore, Penang; Mujiang, Sandakan, Sarawak, Borneo.
- fragila* Funkhouser, Phil. Jour. Sci. xxxiii, p. 121, pl. 4, fig. 27. (1927). Samar, Philippines.
- nigrocarinata*, Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 234, pl. 6, fig. 1. (1914). Los Baños, Mt. Makiling, Benguet, Bagnio, Philippines.

- akonis* Matsumura, Annot. Zool. Jap. viii, p. 20. (1912). Koshun, Ako, Shinsha, Shirin, Hokuto, Hime-Taiwan, Formosa Is.
- albomacula* Funkhouser, Jour. Fed. Malay Sts. xiii, p. 2, fig. 3. (1927). Lumpur Kuala, Selangor, Malacca.
- flavolineata* Distant, Faun. Brit. Ind. iv, p. 65, fig. 54. (1908). Ranchi, Bengal, India; Burma; Peradinya, Ceylon.
- sœrcelångœna* Bierman, Notes Leyden Mus. xxxiii, p. 47. (1911). Sœrcelångœn, Sumatra.
- parvula* Lindberg, Noct. Ent. vii, p. 27, figs. 5, 10. (1927). Spasskaja, Ussuri region, E. Siberia.
- luteipennis* Funkhouser, Jour. Ent. Zool. vi, p. 71, fig. 7. (1914). Los Baños, Luzon, Philippines.
- extrema* Distant, Faun. Brit. Ind. vi, Append. p. 171. (1916). Peradeniya, Ceylon.
- pilinervosa* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 222. (1920). Sandakan, Borneo.
- rubrogranulata* Bierman, Notes Leyden Mus. xxxiii, p. 45. (1911). Singapore, Penang, Malacca; Sandakan, Borneo; Semarang, Java.
- nodipennis* Funkhouser, Suppl. Ent. xv, p. 9, fig. 14. (1927). Gunung Singgalang, Sumatra.
- arisana* Matsumura, (♀), Annot. Zool. Jap. viii, p. 24. (1912). Arisan, Is. Formosa.
- nodinervis* Funkhouser, (♂), Phil. Jour. Sci. xxxiii, p. 122, pl. 4, fig. 29. (1927). Manila, Philippines.
- albolinea* Funkhouser, Jour. Fed. Malay Sts. xiii, p. 3, fig. 4. (1927). Lumpur Kuala, Selangor, Malacca.
- nodinervis* Funkhouser, (♀), (same as ♂, supra).
- nigromaculata* Funkhouser, Suppl. Ent. xv, p. 10, fig. 17, (1927). Fort de Kock, Sumatra.
- gracila* Funkhouser, (♀), Phil. Jour. Sci. xxxiii, p. 120, pl. 4, fig. 26. (1927). Samar, Philippines.
- myittæ* Distant, Faun. Brit. Ind. iv, p. 64. (1908). Tenasserim, Myitta, India.
- sikimensis* Distant, Faun. Brit. Ind. iv, p. 64. (1908). Sikhim, Kotagiri, Madras, Nandidrug, India.
- pulchripennis* Stal, Hemip. Philip. p. 729. (1870); Funkhouser, Biol. Memb. pl. 32, fig. 6. (1917). Butuan, Mindanao; Mt. Maquiling, Los Baños, Davao, Panay, Culasi, Luzon, Philippines; Sandakan, Sarawak, Borneo; Mujang, India.
- fascieifrontis* Funkhouser, Phil. Jour. Sci. xxxiii, p. 122, pl. 4, fig. 28. (1927). Luzon, Philippines.
- irrorata* Funkhouser, Phil. Jour. Sci. xiii, p. 35. (1918). Benguet, Bagnio, Philippines.
- virescens* Funkhouser, Jour. Fed. Malay Sts. Mus. xiii, p. 4, fig. 5. (1927). Lumpur Kuala, Selangor, Malacca.

- nigriceps* Bierman, Notes Leyden Mus. xxxiii, p. 46. (1911). Sørøelængøen, Sumatra.
- tumida* Meliehar, Hom. Ceylon, p. 123. (1903). Kandy, Peradeniya, Maskeliya, Puttalam, Ceylon; Darjiling, Pashok, India.
- indica* Bierman, Notes Leyden Mus. xxxiii, p. 46. (1911). Semarang, Batavia, Banjuwangi, Nongkodjar, Nusa Kambangan, Wonosabo, Java.
- delimitata* Distant, Faun. Brit. Ind. iv, p. 66. (1908). Assam, Magherita, India.
- rivulata* Distant, Faun. Brit. Ind. iv, p. 64. (1908). Sikhim, Mungphu, India. Wonosabo, Java.
- penangi* Funkhouser, Jour. Sts. Mr. Roy. Asiat. Soc. p. 11. (1918). Penang, Malacca.
- orientalis* Funkhouser, Ann. Acad. Sci. Mus. USSR, xxviii, p. 155, pl. 6, fig. 11. (1927). Lake Khanka, USSR, E. Siberia.
- zonata* Matsumura, Annot. Zool. Jap. viii, p. 24. (1912). Horisha, Is. Formosa.
- malaya* Stal, Eug. Resa Omk. J. p. 285. (1859). Malacca.
variegatus Matsumura, Annot. Zool. Jap. viii, p. 21. (1912). Arisan, Formosa.
- varicolor* Stal, (♀), (same as ♂, page 27).
- semifascia* Walker, Jour. Linn. Soc. i, p. 94. (1857). Malacca; Borneo.
- alboapicata* Distant, Faun. Brit. Ind. iv, p. 66. (1908). Tenasserim, Myitta, India. Batavia, Wonosabo, Java.
- hyalifascia* Funkhouser, Suppl. Ent. xv, p. 8, fig. 13. (1927). Fort de Kock, Sumatra.
- sordida* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 13. (1918). Singapore.
- nigrofasciata* Stal, Hemip. Phil. p. 729. (1870). Mt. Maquiling, Mt. Bana-hao, Luzon; Iligan, Dapitan, Davao, Mindanao; Pæte, Philippines; Sandakan, Borneo.
- nervosa* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 13. (1918). Singapore.
- consocia* Walker, Jour. Linn. Soc. i, p. 164. (1857). Borneo.
- lagustri* Matsumura, Annot. Zool. Jap. viii, p. 21. (1912). Honshu, Takasago, Tokyo, Japan.
- semibrunnea* Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. xiv, p. 447, fig. 9. (1929). Bettotan, Borneo.
- guttulinervis* Matsumura, Annot. Zool. Jap. viii, p. 25. (1912). Horisha, Formosa.
- kawakami* Matsumura, Annot. Zool. Jap. viii, p. 26. (1912). Koshun, Is. Formosa.
- arisana* Matsumura, (♂), (same as ♀, see page 28).
- sinuata* Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 237, pl. 6, fig. 7. (1914). Banguay, Borneo.

- bicolor** Funkhouser, (♂), Suppl. Ent. xv, p. 9, figs. 15, 16. (1927). Gunung Singalang, Sumatra.
- lata** Funkhouser, Bull. Brook. Ent. Soc. xvi, p. 51, fig. 12. (1912). Kiautschau, China.
- majuscula** Distant, Faun. Brit. Ind. iv, p. 61, fig. 53. (1908). Sikhim, Mungphu, Bengal Hills, Rangamati, Chittagong, Pashok, Darjiling, India.
- bicolor** Funkhouser, (♀), (same as ♂, see supra).
- robusta** Distant, Faun. Brit. Ind. iv, p. 61. (1908). Banguay, Borneo; Calcutta, Kurseong, India.
- affinis* Distant, Faun. Brit. Ind. iv, p. 61. (1908). Tenasserim, Myitta, Bombay, India; Sandakan, Banguay, Borneo.
- cælata** Distant, Faun. Brit. Ind. vi, Append. p. 172. (1916). Nilgiri Hills, India.
- flavocarinata** Funkhouser, Suppl. Ent. xv, p. 8, fig. 12. (1927). Fort de Kock, Sumatra.
- pinguis** Funkhouser, Phil. Jour. Sci. xiii, p. 33, pl. 1, figs. 15, 15. (1918). Zamboanga, Davao, Mindanao, Philippines.
- gracila** Funkhouser, (♂), (same as the ♀, see page 27).
- luconica** Fairmaire, Rev. Memb. p. 255. (1846). Negros, Cuernos Mts., Mindanao; Dapitan, Mt. Maquiling, Luzon, Philippines; Penang, Malacca; Sandakan, Borneo.
- confusa** Distant, Faun. Brit. Ind. vi, Append. p. 171. (1916). Calcutta, India.
- mixta** Buckton, Mon. Memb. p. 257, pl. 59, fig. 8. (1903). Bombay, Calcutta, Tenasserim, Myitta; Bolongoda, Coimbatore, Behar, Perambikulam, Akra, Cochin State, India; Ceylon; Sandakan, Borneo.
- variegata* Meliehar, Hom. Ceylon, p. 123. (1903). Colombo, Malanda, Peradeniya, Kekirawa, Puttalam, Ceylon.
- nandidrugana* Distant, Faun. Brit. Ind. vi, Append. p. 171. (1916). Nandidrug, India.
- patruelis** Stal, Eug. Resa Omk. J. p. 285. (1859). Malinao, Tayabas, Mt. Banahao, Luzon, Davao, Mindanao, Philippines; Java.
- splendidula* Distant, Faun. Brit. Ind. vi, Append. p. 172. (1916). N. India.
- pygmæa** Walker, List. Hom. Brit. Mus. p. 630. (1851). Palawan, Puerta Princessa, Luzon, Mt. Banahao, Panay, Culasi, Mindanao, Davao, Philippines; Penang, Malacca.
- grisea* Buckton, Mon. Memb. p. 63, pl. 9, fig. 7. (1903). Philippines.
- garampina** Matsumura, Annot. Zool. Jap. viii, p. 22. (1912). Hoshun, Is. Formosa.
- maculipennis** Funkhouser, Phil. Jour. Sci. xiii, p. 32, pl. 1, figs. 13, 14. (1918). Benguet, Bagnio, Luzon, Philippines; Sandakan, Borneo.
- apicata** Meliehar, Hom. Ceylon, p. 124. (1903). Peradeniya, Ceylon.
- pilosa** Funkhouser, Suppl. Ent. xv, p. 7, fig. 11. (1927). W. Sumatra.
- discrepans** Goding, Am. Mus. Nov. No. 421, p. 24. (1930). Banguay, Borneo.

- donatzæ* Matsumura, Annot. Zool. Jap. viii, p. 23. (1912). Honshu, Halone, Tokyo, Japan.
- attenuata* Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 236, pl. 6, fig. 4. (1914). Penang, Malacca; Banguay, Sandakan, Borneo.
- nigroapica* Funkhouser, (♂), (same as the ♀, see page 27).
- sericea* Distant, Faun. Brit. Ind. iv, p. 63. (1908). Kerbuwa, Ceylon.
- nitidipennis* Funkhouser, (♂), (same as the ♀, see page 27).
- ornata* Funkhouser, Phil. Jour. Sci. xl, p. 128. (1929). Borneo.
- trinitata* Distant, Faun. Brit. Ind. iv, p. 63. (1908). Tenasserim, Myitta, India.
- semivitreæ* Walker, Jour. Linn. Soc. i, p. 94. (1857). Singapore.
- brunneidorsata* Funkhouser, Phil. Jour. Sci. xl, p. 128. (1929). Pekalongan, Java.
- trifoliata* Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 235, pl. 6, fig. 3. (1914); Phil. Jour. Sci. x, p. 400, pl. 2, fig. 19 (1915). Mt. Maquiling, Luzon, Philippines.
- minuta* Funkhouser, Jour. N. Y. Ent. Soc. xxii, p. 236, pl. 6, fig. 5. (1914). Banguay, Borneo.

Xanthosticta

- Buckton, Mon. Memb. p. 63. (1903); *Tiberianus* Distant, Ann. Mag. N. H. xvi, p. 493. (1915); Goding, Jour. N. Y. Ent. Soc. xxxviii, p. 39. (1930).

KEY TO SPECIES

- 1(6). Tegmina hyaline without brown markings except base.
- 2(5). Median carina of pronotum subobsolete anteriorly; veins of tegmina not nodulate.
- 3(4). Pronotum black, apex of posterior process reaching apex of clavus; tegmina smoky hyaline ferruginous tinged; 4.3 × 2.3 mm. **pseudocornis**
- 4(3). Pronotum brown, apex of posterior process passing apex of clavus; tegmina yellowish, iridescent; 6 mm. **rugosa**
- 5(2). Median carina distinctly percurrent, pronotum brown, posterior process darker, apex ferruginous far passing apex of clavus; tegmina clear hyaline, veins nodulate; 4.5–5.5 × 2.4 mm. **siberica**
- 6(1). Tegmina with brown or piceous markings.
- 7(10). Tegmina without transverse bands; posterior process shorter than abdomen.
- 8(9). Tegmina vinaceous hyaline, apical third piceous; pronotum black, legs tawny; 7 mm. **biplaga**
- 9(8). Tegmina orange yellow, basal third and streaks on apical area brown, tips broadly clear hyaline; entirely brown; 7 mm. **luzonica**
- 10(7). Tegmina hyaline with two transverse brown bands; pronotum brown, median carina percurrent a tawny stripe each side; posterior process long as abdomen; body and legs tawny; 4 mm. **constipata**

LIST OF SPECIES

- pseudocornis** Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 217, figs. 13, 14. (1920). Penang, Sumatra.
- rugosa** Montrozier, Ann. Soc. Lyon, (2), vii, p. 113. (1855). Woodlark Is., west of New Guinea.
- siberica** Lethierry, Ann. Soc. Ent. Belg. xix, p. 80. (p. 4 in reprint) (1876). Ussuri R., Siberia.
- subinermis* Lindberg, Not. Ent. vii, p. 24, figs. 3, 8. (1927). Vladivostok, Spasskaja, Ussuri, Siberia.
- biplaga** Walker, Jour. Linn. Soc. x, p. 191. (1868). Waigiu Is.; Celebes Is.
- vulpecula* Breddin, Ab. Nat. Ges. Halle, xxiv, p. 125. (1901). Duri, Celebes Is.
- luzonica** Buckton, Mon. Memb. p. 64, pl. 9, fig. 8. (1903). Luzon, Philippines.
- constipata** Walker, Jour. Linn. Soc. x, p. 192. (1868). Mysol Is., east of N. Guinea.

Ebhul

- Distant, Fauna British India, iv, p. 59. (1908).

KEY TO SPECIES

- 1(6). Pronotum unicarinate, basal margin projecting forward in a flange.
- 2(5). Basal area of tegmina brown or black.
- 3(4). Pronotum black, posterior process tricarinate, ochraceous at middle, body and legs brown; tegmina grayish, broad basal area black, claval area brown and black mottled, white line between the two areas, apical area black mottled; 5 mm. **varius**
- 4(3). Pronotum brown, its summit strongly foveate with margins ridged, base and middle of posterior process ochraceous; tegmina brownish gray tessellate on apical area; 5.5 mm. **formicarius**
- 5(2). Basal half of tegmina yellow, apical half dark brown; pronotum dark brown, posterior process yellow at middle, tibiae and tarsi yellow; 6×2.7 mm. **maculipennis**
- 6(1). Pronotum brown, tricarinate, basal margin not projecting forward, middle of posterior process white apex black; tegmina brown followed by triangular black fascia, then a triangular white fascia and a subapical black fascia, tips subhyaline; 5×2 mm. **carinatus**

LIST OF SPECIES

- varius** Walker, List Hom. B. M. Suppl. p. 162. (1858); Distant, Faun. Brit. Ind. iv, p. 59, fig. 51. (1908). Maymyo, Burma; Singapore, Penang; Fort de Kock, Sumatra; Sarawak, Borneo.
- formicarius** Distant, Faun. Brit. Ind. vi, Append. p. 169, fig. 125. (1916). Maymyo, Burma.
- maculipennis** Funkhouser, Rec. Ind. Mus. xxiv, p. 326, pl. 10, fig. 3. (1922). Pashok, Darjiling, E. Himalayas, India.

carinatus Funkhouser, Phil. Jour. Sci. x, p. 393, pl. 2, fig. 17. (1915).
Butuan, Mindanao, Philippines.

Ebhuloidesini

Ebhuloides

Goding, Jour. N. Y. Ent. Soc.

KEY TO SPECIES

- 1(4). Median carina of pronotum moderately elevated, base of posterior process distinctly elevated above scutellum then straight.
- 2(3). Base of head bituberculate; pronotum black, not pubescent, posterior process pale brown, legs yellow brown; sides of chest bidentate; tegmina with basal third black, opaque, remaining area hyaline with black spots; 5.5×2 mm. **notatus**
- 3(2). Base of head nontuberculate; entirely brown, pubescent; sides of chest unidentate; tegmina flavous, opaque, fine brown lines on apical area; 4.5×1.8 mm. **uniformis**
- 4(1). Median carina of pronotum elevated in a crest at summit; entirely brown, posterior process slightly elevated above scutellum then sinuate; sides of chest bidentate, head bituberculate; tegmina brown, opaque, broad hyaline subapical spot; 6×2.5 mm. **elegans**

LIST OF SPECIES

- notatus** Funkhouser, Suppl. Ent. xv, p. 17, fig. 27. (1927). Gunnung Singgalang, Sumatra.
- uniformis** Funkhouser, Suppl. Ent. xv, p. 18, fig. 28. (1927). Fort de Koek, Gunnung Singgalang, Sumatra.
- elegans** Funkhouser, Phil. Jour. Sci. xl, p. 117, pl. 1, fig. 9. (1929). Manorg, Borneo.

Centrotini

Antialcides

- Distant, Ann. Mag. N. H. xvii, p. 326. (1916); *Pantaleon* Distant, Ann. Mag. N. H. xvii, p. 327. (1916).

KEY TO SPECIES

- 1(6). Suprahumeral gradually acuminate, tips acute.
- 2(5). Tegmina opaque brown; tip of posterior process straight.
- 3(4). Corium with two vitreous spots on exterior margin, and basal and central testaceous spot; pronotum black, carinae tawny, crest of posterior process convex; 6.5 mm. **trifoliaceus**
- 4(3). Corium ferruginous without spots; pronotum ferruginous, crest of posterior process triangular; 6.5×4.7 mm. **erectus**
- 5(2). Tegmina hyaline, base broadly opaque, spot near apex of clavus and tips brown, veins to apical cells inwardly curved; pronotum

- slender, brown, pubescent, suprahumeral shorter than intermediate space, oblique, crest of posterior process high as suprahumeral, twice longer than high, apical area behind crest curved upward; 4.6×2.2 mm. **attenuatus**
- 6(1). Suprahumeral broad, tips bifid, oblique; tegmina opaque brown.
- 7(10). Tegmina without spots; legs brownish.
- 8(9). Piceous, pronotum much depressed in front, angular each side before humeral, suprahumeral twice as long as intermediate space, crest of posterior process conical lightly inclined forward, disk each side concave; 7 mm. **montifer**
- 9(8). Entirely brown, suprahumeral oblique, much longer than intermediate space, crest of posterior process slightly longer than high front margin vertical, rounded behind, with ferruginous lines; 7×3.5 mm. **brunneus**
- 10(7). Tegmina with central area, apical cells except the first, and middle of apical margin hyaline; brown, disk of posterior process crescentiform, the punctures and legs yellow; 6×3 mm. **dorsalis**

LIST OF SPECIES

- trifoliaceus** Walker, List Hom. B. M. Suppl. p. 163. (1858). North China.
- erectus** Funkhouser, Bull. Brook. Ent. Soc. xvi, p. 47, figs. 7, 8. (1921); Lingn. Sci. Jour. vii, p. 478, pl. 14, fig. 3. (1929). Kiautschau, China.
- attenuatus** Funkhouser, Rec. Ind. Mus. xxiv, p. 327, pl. 10, fig. 4. (1922). Sureil, E. Himalayas, India.
- montifer** Walker, List Hom. B. M. p. 620 (1851). Hong Kong, China.
- brunneus** Bull. Brook. Ent. Soc. xvi, p. 45, figs. 5, 6. (1921). Hiantschau, China.
- dorsalis** Matsumura, Annot. Zool. Jap. viii, p. 18. (1912). Kammutsu, Horisho, Formosa Is.

Machærotypus

Uhler, Proc. U. S., Nat. Mus. xix, p. 284. (1896); *Maurya* Distant, Ann. Mag. N. H. xvii, p. 326. (1916); Goding, Jour. N. Y. Ent. Soc. xxxviii, p. 39. (1930).

KEY TO SPECIES

- 1(6). Posterior process laterally broad to just before apex, pronotum and legs brown.
- 2(5). Tegmina brownish hyaline or subhyaline, veins not nodulate; median carina of pronotum strong, dorsum of posterior process nearly straight.
- 3(4). Ocelli nearer to eyes; pronotum castaneous brown base darker, suprahumeral much shorter than intermediate space, extended outward; tegmina hyaline without spots; $5-6 \times 2.9$ mm. **sellatus**

- 4(3). Ocelli equidistant; pronotum brown mottled with black, suprahumeral long as intermediate space extended outward and forward; tegmina translucent brown darker mottled, tips ferruginous tinged; 6.2×3 mm. **angulatus**
- 5(2). Tegmina yellowish brown, subopaque, two darker spots on apical margin, veins nodulose; pronotum rust brown with black basal dots, suprahumeral horizontal, much shorter than intermediate space, median carina weak, base of posterior process lightly gibbous, dorsum sinuate; body black, legs brown; 6×2.6 mm. **vitulus**
- 6(1). Posterior process pale yellow, middle band and tip piceous, laterally broad on basal half dorsum convex, then abruptly attenuate to apex, pronotum pale luteus, base with head and chest piceous; suprahumeral subhorizontal, long as intermediate space, front margin rounded and piceous; tegmina with two tawny bands, base piceous; legs and abdomen reddish; 4 mm. **gibbosulus**

LIST OF SPECIES

- sellatus** Uhler, Proc. U. S., Nat. Mus. xix, p. 284. (1896); Goding, Jour. N. Y. Ent. Soc. xxxviii, p. 40. (1930). Japan.
- brevicornis** Funkhouser, Bul. Brook. Ent. Soc. xvi, p. 49. (1921). Harima, Japan.
- angulatus** Funkhouser, Bul. Brook. Ent. Soc. xvi, p. 48, fig. 9, 10. (1921). Kiautschau, China.
- vitulus** Lindberg, Noc. Ent. iv, p. 23, figs. 2, 7. (1927). Spasskaja, Ussuri R., Vladivostok, Evgenievka, Siberia; Atani, Japan.
- gibbosulus** Walker, Jour. Linn. Soc. x, p. 187. (1868). Macassar, Celebes Is.

Otaris

- Buckton, Mon. Memb. p. 249. (1903).

KEY TO SPECIES

- 1(6). Suprahumeral projecting forward.
- 2(5). Posterior process unicarinate, suprahumeral moderately diverging, pronotum brown, pubescent, legs yellowish; tegmina hyaline or subhyaline, veins nodulate.
- 3(4). Tegmina with base brown, opaque, apical margin brown; suprahumeral double longer than intermediate space, subparallel, tips rounded, apex of posterior process passing apex of clavus; body black; 1.7×1.7 mm. **porrectus**
- 4(3). Tegmina pale yellow clouded; suprahumeral long as intermediate space, subdiverging, tips truncate, apex of posterior process not passing apex of clavus; body brown; 7 mm. **mojiensis**
- 5(2). Posterior process tricarinate, tip slightly passing apex of clavus, pronotum ferruginous or black, weakly carinate, suprahumeral subparallel, more than twice longer than intermediate space,

- tips rounded and flattened; body brown, legs ferruginous; 6×2.3 mm. **convergens**
- 6(1). Suprahumerals horizontal or oblique, not projecting forward.
- 7(14). Suprahumerals horizontal or subhorizontal.
- 8(11). Tegmina hyaline without bands or spots, sometimes clouded, veins nodulose; entirely reddish brown, suprahumeral short, posterior process unicarinate.
- 9(10). Ocelli nearer to eyes; tegmina clear hyaline, apical area brown clouded: 3.5×3 mm. **minor**
- 10(9). Ocelli equidistant; tegmina brown clouded; 5×4 mm. **intermedius**
- 11(8). Tegmina bronze hyaline with spot or transverse band, veins without nodules; posterior process tricarinate.
- 12(13). Apex of posterior process elevated not touching margins of tegmina, suprahumeral very short, tips roundly subtruncate; black, legs ochraceous; tegmina with a distinct paler transverse band; 5.5×3 mm. **subangulatus**
- 13(12). Apex of posterior process straight touching margins of tegmina; suprahumeral long, broad, tips obliquely truncate; dark brown; tegmina with large white subbasal spot; 5.5×4 mm. **horizontalis**
- 14(7). Suprahumerals more or less oblique, sometimes nearly erect.
- 15(20). Posterior process unicarinate, apex concolorous with pronotum.
- 16(19). Median carina of pronotum absent anteriorly, suprahumeral equally broad to squarely truncate tips.
- 17(18). Black; suprahumeral long, broad; posterior process broad, apex abruptly acute not passing apex of clavus; tegmina ferruginous hyaline, veins nodulose; ocelli equidistant; 6×6 mm. **truncaticornis**
- 18(17). Brown; suprahumeral shorter, posterior process broad to middle, apical half moderately slender passing apex of clavus; tegmina dense brown; 8×4 mm. **auritus**
- 19(16). Median carina of pronotum percurrent, reddish; pronotum reddish brown mottled with black, two vertical black stripes on metopidium, suprahumeral broad, tips black, anteriorly rounded, truncate; posterior process broad, tip black, abruptly acute passing apex of clavus; tegmina smoky hyaline, base black, veins pilose; 5×4 mm. **lata**
- 20(15). Posterior process tricarinate.
- 21(26). Pronotum brown or ochraceous, gray pilose, legs yellowish.
- 22(23). Suprahumerals weakly oblique, upper surface rugose, posterior process moderately attenuated, darker on basal half passing apex of clavus **kamaonensis**
- 23(22). Suprahumerals distinctly oblique, posterior process robust, gradually narrowed to subacute apex not passing apex of clavus.

- 24(25). Pronotum bronze brown, tips suprahumeral darker; tegmina pale bronze brown, base darker; 5×3.5 mm. **æneus**
- 25(24). Pronotum ochraceous, suprahumeral rounded and slightly ampliate anteriorly with central carina on upper surface, tips rounded, posterior process tectiform apical third black; tegmina pale ochraceous subhyaline; 5×3.5 mm. **selenus**
- 26(21). Pronotum and legs black, yellow pilose, suprahumeral moderately broad, distinctly oblique, weak carina behind middle of upper surface; posterior process robust, median carina obscure on the front, gradually acuminate to apex of clavus; tegmina pale bronze, base darker more opaque, frequently with several extra cross veins; $4.5-5 \times 3$ mm. **congestus**

LIST OF SPECIES

- porrectus** Funkhouser, Phil. Jour. Sci. xl, p. 118, pl. 1, fig. 10. (1929). Davao, Luzon, Philippines.
- mojiensis** Matsumura, Annot. Zool. Jap. viii, p. 17. (1912). Hokkaido, Morioka, Otaru, Monshu, Hakone, Moji, Japan.
- convergens** Walker, List Hom. B. M. p. 623. (1851); Funkhouser, Phil. Jour. Sci. x, p. 385, pl. 1, fig. 9. (1915). Los Baños, Manila, Panay, Culasi, Luzon, Philippines.
- minor** Schmidt, Zool. Anz. xxxviii, p. 243. (1911). Sèkaranda, Sumatra.
- intermedius** Schmidt, Zool. Anz. xxxviii, p. 242. (1911). Mt. Marapok, Dent, Borneo.
- subangulatus** Distant, Faun. Brit. Ind. iv, p. 55. (1908). Nilgiri Hills, Chikkaballapura, India; Rajmahal, Bolund, Goalbathan, Bengal; Moulmein, Burma.
- horizontalis** Distant, Faun. Brit. Ind. vi. Append. p. 164. (1916). Moulmein, Burma.
- truncaticornis** Funkhouser, Jour. Str. Br. Roy. Asiat. Soc. p. 8. (1918). Singapore; Sandakan, Borneo.
- auritus** Buckton, Mon. Memb. p. 249, pl. 59, fig. 1. (1903). Sèkaranda, Pangherang-Pisang, Ager Manteior, Sumatra.
- latus** Funkhouser, Suppl. Ent. xv, p. 5, figs. 8, 10. (1927). Mt. Guning, Singgalang, Sumatra.
- kamaonensis** Distant, Faun. Brit. Ind. vi, Append. p. 163. (1916). Kumaon, Bhimtal, Ceylon; Bombay, India.
- æneus** Distant, Faun. Brit. Ind. vi, Append. p. 167. (1916). E. Himalayas, Peshoke, Kurseong, Darjiling, Kallimpong, Ghumti, Pusingbing, Myitta, Assam, Margherita, Kumaon, Almora, Tenasserim, Bengal, India.
- selenus** Buckton, Mon. Memb. p. 247, pl. 60, fig. 6. (1903). Tenasserim, Myitta, India.
- congestus** Walker, Ins. Saund. Hom. p. 79. (1858). Sulu Is., Philippines.

(To be continued)